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**IN THE CLAIMS:**

1. (currently amended) An XDSL system comprising:  
a hybrid circuit in operative communication with a transmission line and an XDSL modem associated with a subscriber premises, said hybrid circuit comprising a plurality of selectable impedance circuits; and  
a switch for connecting each of said plurality of selectable impedance circuits in-line with said XDSL modem and said transmission line in response to a control signal,  
wherein one of said plurality of impedance circuits has an impedance value equal to a characteristic line impedance of said transmission line without a bridged tap, and  
wherein one of said plurality of impedance circuits has an impedance value equal to a characteristic line impedance with a bridged tap.
2. (original) The XDSL system of claim 1 further comprising a controller for producing said control signal as a function of a performance characteristic associated with each of said impedance circuits.
3. (original) The XDSL system of claim 1 wherein the plurality of selectable impedance circuits equals four.
4. (cancelled)
5. (cancelled)
6. (original) The XDSL system of claim 2 wherein said performance characteristic is a data transmission rate and said control signal corresponds to the respective impedance circuit associated with the highest data transmission rate value.

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7. (currently amended) A method of configuring an XDSL system comprising:

providing a hybrid circuit in-line with a transmission line and an XDSL modem associated with a subscriber premises, said hybrid circuit comprising a plurality of selectable impedance circuits; and

engaging one of said plurality of selectable impedance circuits in-line with said transmission line and said XDSL modem in response to a control signal, wherein the step of engaging includes the step of engaging serially each of said plurality of impedance circuits in-line with said transmission line and said XDSL modem;

determining a performance characteristic of said XDSL system for each of said plurality of impedance circuits when engaged, and outputting said control signal as a function of each of said performance characteristics; and

wherein said performance characteristic is a data transmission rate and said control signal corresponds to a first respective impedance circuit associated with a data rate greater than a selected rate.

8. (cancelled)

9. (cancelled)

10. (currently amended) The method of claim [[9]] 7 wherein said performance characteristic is a data transmission rate and said control signal corresponds to the respective impedance circuit associated with the highest data rate.

11. (cancelled)

12. (currently amended) The method of claim [[9]] 7 wherein the step of outputting includes the step of comparing each of said performance characteristics associated with each respective impedance circuit.

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13. (cancelled)

14. (currently amended) ~~The method of claim 13~~ A method of configuring an XDSL system comprising:

providing a hybrid circuit in-line with a transmission line and an XDSL modem associated with a subscriber premises, said hybrid circuit comprising a plurality of selectable impedance circuits; and

engaging one of said plurality of selectable impedance circuits in-line with said transmission line and said XDSL modem in response to a control signal,

wherein the step of engaging includes the step of engaging seriatimly each of said plurality of impedance circuits in-line with said transmission line and said XDSL modem;

determining a performance characteristic of said XDSL system for each of said plurality of impedance circuits when engaged, and outputting said control signal as a function of each of said performance characteristics; and

wherein said performance characteristic is a data transmission rate and said control signal corresponds to a first respective impedance circuit associated with a data rate greater than a selected rate; and

wherein one of said plurality of impedance values is equal to a characteristic line impedance with a bridged tap.

15. (currently amended) An XDSL system comprising:

a hybrid circuit in operative communication with a transmission line and an XDSL modem associated with a subscriber premises, said hybrid circuit comprising a plurality of selectable impedance circuits;

a switch for connecting each of said plurality of selectable impedance circuits in-line with said XDSL modem and said transmission line in response to a control signal; and

a controller programmed to determine a performance characteristic associated with each of said plurality of selectable impedance circuits when connected, and output said control signal as a function of said performance characteristics

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associated with each of said impedance circuits,

wherein one of the plurality of impedance circuits comprises a 460 ohm resistor in parallel with a 1200 ohm resistor and 520 pF capacitor.

16. (original) The XDSL system of claim 15 wherein the number of impedance circuits is four.

17. (original) The XDSL system of claim 15 wherein said performance characteristic is a transmission data rate.

18. (original) The XDSL system of claim 15 wherein said performance characteristic is a transmission line attenuation.

19. (original) The XDSL system of claim 15 wherein said performance characteristic is a noise margin.

20. (cancelled)